CLAIMS

What is claimed is:

1   1.   A method of blending at least two images using a blending unit in a graphics

2   engine, the blending unit including a plurality of multipliers, the method comprising the

3   steps of:

4   receiving a request for blending the at least two images, each image having a pixel

5   format; and

6   reconfiguring each blending unit multiplier to perform at least two operations per

7   cycle.

1   2.   The method of claim 1, wherein the step of reconfiguring includes bit slicing each

2   multiplier according to the pixel format.

1   3.   The method of claim 1, wherein the step of bit slicing includes bit slicing each

2   multiplier to accommodate a first bits/pixel parameter of the pixel format.

1   4.   The method of claim 3, wherein the step of bit slicing includes bit slicing each

2   multiplier to accommodate a second bits/pixel parameter of the pixel format.

1   5.   The method of claim 3, wherein the first bits/pixel parameter is a highest

2   bits/pixel parameter of the pixel format.

1   6.   The method of claim 5, wherein the highest bits/pixel parameter is no higher than

2   8 bits/pixel and no less than 1 bit/pixel.

1   7.   The method of claim 1, wherein each blending unit multiplier is an 8 bit-by-8 bit

2   multiplier.

1   8.   A graphics system having a blending unit, the blending unit comprising:

2   a plurality of multipliers; and

3   a reconfiguration module that reconfigures each multiplier of the blending unit to

4   perform at least two operations per cycle.

1   9.   The graphic system of claim 8, wherein the reconfiguration module bit slices each

2   multiplier according to a pixel format.

1   10.   The graphics system of claim 8, wherein the reconfiguration module bit slices

2   each multiplier to accommodate a first bits/pixel parameter of a pixel format, and then a

3   second bits/pixel parameter of the pixel format.

1   11.   The graphics system of claim 8, wherein the blending unit is part of a graphics

2   engine.

1   12.   The graphics system of claim 8, wherein the graphics engine further comprises at

2   least one of a raster operator, a color key operator, a pixel bit mask operator, a patter write

3   mask operator and a pixel boundary modify write operator.

1   13.   A digital video system comprising:

2   a processor;

3   a memory;

4   an application resident in memory; and

5   a graphics system for generating graphics, the graphics system including:

6   a blending unit including a plurality of multipliers, and

7   means for reconfiguring each multiplier of the blending unit to perform at

8   least two operations per cycle.

1   14.   The system of claim 13, wherein the means for reconfiguring bit slices each

2   multiplier according to a pixel format.

1   15.   The system of claim 13, wherein the means for reconfiguring bit slices

2   each multiplier to accommodate a first bits/pixel parameter of the format, and then a

3   second bits/pixel parameter of the format.

1   16.   The system of claim 13, wherein the means for reconfiguring is part of a graphics

2   engine.

1   17.   The system of claim 16, wherein the graphics engine further comprises at

2   least one of a raster operator, a color key operator, a pixel bit mask operator, a pattern

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3   write mask operator and a pixel boundary modify write operator.

1   18.   The system of claim 13, wherein the graphics system further comprises a scaler.